

Amendments to the Claims:

1. (Currently Amended) A method for method for decoding ~~(extracting)~~ a Linear Time Code (LTC) frame of the type used in connection with film and television and accompanying audio, comprising the steps of

(a) detecting a valid synchronization sequence within an incoming LTC frame while measuring a predetermined symbol interval relative to a reference clock, including:

triggering a half-symbol duration counter upon a first change in a bi-phase mark symbol;

upon a second change of the bi-phase mark symbol, stopping the half-symbol duration counter, storing a current count, and resetting the half-symbol duration counter;

counting the half-symbol duration until a third change of the bi-phase mark symbol; and

comparing the current count to a previously stored count to determine whether the synchronization sequence is valid;

(b) determining a LTC frame direction;

(c) decoding payload information from the LTC frame; and

(d) transferring the payload information in an order determined by the LTC frame direction.

2. (Original) The method according to claim 1 wherein the step of measuring the predetermined symbol interval duration comprises the step of measuring how many 27 MHz clock periods occur within a duration of bi-phase encoded half mark symbol interval within the LTC frame.

3. (Currently Amended) The method according to claim 2 wherein the decoding step ~~steps~~ further comprises the step of extracting successive symbols from the LTC frame using the measured 27 MHz clock periods as a reference.

4. (Currently Amended) The method according to claim 3 wherein a minimum required symbol interval for the 27 MHz clock is seventy clock periods.
5. (Currently Amended) The method according to claim 3 wherein a maximum allowable symbol interval for the 27 MHz clock is 210,937 clock periods ~~210,497~~.
6. (Original) The method according to claim 1 further including the step of filtering each incoming LTC to remove a glitch.
7. (Currently Amended) The method according to claim 1 wherein steps (a)-(d) are repeated upon receipt of ~~for~~ each successive LTC frame.
8. (Currently Amended) An LTC receiver for decoding ~~(extracting)~~ a Linear Time Code (LTC) frame of the type used in connection with film and television and accompanying audio, comprising
 - (a) first means for detecting a valid synchronization sequence within an incoming LTC frame while measuring a predetermined symbol interval relative to a reference clock,
including:
 - means for triggering a half-symbol duration counter upon a first change in a bi-phase mark symbol;
 - means for stopping the half-symbol duration counter, storing a current count, and resetting the half-symbol duration counter, upon a second change of the bi-phase mark symbol;
 - means for counting the half-symbol duration until a third change of the bi-phase mark symbol; and
 - means for comparing the current count to a previously stored count to determine whether the synchronization sequence is valid;
 - (b) second means for determining a LTC frame direction;
 - (c) third means for decoding payload information from the LTC frame; and
 - (d) fourth means for transferring the payload information in an order determined by the LTC frame direction.

9. (Original) The LTC receiver according to claim 8 wherein the first means includes a first counter for measuring the predetermined symbol interval duration comprises the step of measuring how many 27 MHz clock periods occur within a duration of bi-phase encoded half mark symbol interval within the LTC frame.

10. (Currently Amended) The LTC receiver according to claim 8 wherein the second means includes a second counter for counting sync pulses in the incoming LTC frame to determine the ~~establish a~~ LTC frame direction.

11. (Original) The LTC receiver according to claim 8 wherein the third means includes a data symbol counter for counting symbols within the incoming LTC frame.

12. (Original) The LTC receiver according to claim 8 wherein the fourth means includes a state machine.

13. (Currently Amended) An LTC receiver for decoding (~~extracting~~) a Linear Time Code (LTC) frame of the type used in connection with film and television and accompanying audio, comprising

a first counter for measuring a predetermined symbol interval relative to a reference clock, wherein the first counter begins counting a half-symbol duration upon a first change in a bi-phase mark symbol, wherein the first counter stops counting the half-symbol duration upon a second change of the bi-phase mark symbol, stores a current count, and resets the half-symbol duration counter; and wherein the first counter counts the half-symbol duration until a third change of the bi-phase mark symbol;

a second counter for counting sync pulses within the incoming LTC frame;

a third counter for counting data symbols within the incoming LTC frame;

a shift register and

a state machine responsive to the counts of the first, second and third counters for (a) detecting a valid synchronization sequence within an incoming LTC frame, (b) determining a LTC frame direction; (c) decoding payload information from the LTC frame; and (d) for transferring the payload information to the shift register in an order determined by the LTC

frame direction, wherein the valid synchronization sequence is detected by comparing the current count to a previously stored.

14. (Original) The apparatus according to claim 13 further comprising a glitch filter for filtering the incoming LTC frame to remove glitches.

15. (Original) The apparatus according to claim 13 wherein the first counter measures the predetermined symbol interval duration by measuring how many 27 MHz clock periods occur within a duration of bi-phase encoded half mark symbol interval within the LTC frame.